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|---|-------------|----------------------|---------------------|------------------|
| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/750,261  | 12/31/2003  | Steve S.K. Chou      | TRMB1405            | 1726             |
| 704/09 7590 09/16/2009<br>TRIMBLE NAVIGATION LIMITED C/O WAGNER BLECHER<br>123 WESTRIDGE DRIVE<br>WATSONVILLE, CA 95076 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| ORR, HENRY W  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 2175  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
| 09/16/2009  |             | PAPER                |                     |                  |

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/750,261  
Filing Date: December 31, 2003  
Appellant(s): CHOU, STEVE S.K.

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Chou  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/20/2009 appealing from the Office action mailed March 16, 2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. In addition, Examiner acknowledges that amendment to specification in reply after final dated 7/20/2009 has been entered and the objection to specification in final action dated 3/16/2009 has been withdrawn.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Arc Second, Inc., "PocketCAD Extreme Mobility", User Guide PocketCAD PRO Version 4.0, May 2001 pages 1-124

|           |                       |         |
|-----------|-----------------------|---------|
| 4,663,616 | Christensen, Carol S. | 5-1987  |
| 5,568,565 | Minakata, Hiroshi     | 10-1996 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 3, 4, 7, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over User Guide PocketCAD PRO Version 4.0 (hereinafter "PocketCAD") running on a general mobile device, May 2001 of record in view of Christensen, U.S. Patent No. 4,663,616 A.**

Claim 1:

PocketCAD teaches **a system for entry and display of blueprint data comprising a handheld device, said handheld device further comprising:**

PocketCAD teaches **a system for entry and display of blueprint data comprising a handheld device, said handheld device further comprising:** (see Introduction p. 9-10)

**a graphical user interface for providing line segment data entry fields, (see Drawing Lines p. 48-54) arc data fields comprising a start point field (e.g. center point field), an end point field (e.g. end point field), and a radius field (e.g. start point field) (see Arc with Center tool p. 55, Arcs p.87) and for displaying input line segments and arc data (see Polyline tool p. 51-53);**

PocketCAD teaches a mobile device capable of having a processor and memory adapted for accepting one at a time, storing, and editing line segment and arc data associated with said input line segments (see System Specifications p. 10, User Interface Features p. 10-11, Using CadExchange p. 15-17, Polyline tool p. 51-53-e.g. adding a line one at a time to create a polyline object. ). **(claim 1; i.e., a processor and memory adapted for accepting one at a time, storing, and editing line segment and arc data associated with said input line segments)**

Pocket CAD teaches a Object Properties Dialog window for polylines capable of automatically updating the segmentation of a previously placed arc created by a polyline into at least two distinct arc segment (see Polylines p. 90). **(claim 1; i.e., said editing of said arc data further comprising an arc segmenter for automatically segmenting a previously placed arc into at least two distinct arc segments.)**

Although, PocketCAD fails to explicitly recite the phrase "hierarchical sequence", PocketCAD does suggest adding and storing line segments one at a time in a hierachical sequence. Examiner submits that the PocketCAD application allows the user to add lines one at a time in a "hierarchical sequence". For instance, a user creating a polyline must add a line to an existing line (see Polyline tool p. 51-53). Thus,

each line that is added to the existing polyline object is done so in a "hierarchical sequence". Examiner submits that the storing of the line objects may be determined by the order in which the lines are added to the polyline object. Therefore, since a polyline object can be created in a hierarchical sequence by adding lines one at a time, PocketPad must teach or suggest storing in a hierarchical sequence one line at a time. **(claim 1; i.e., and wherein said input line segments are stored as a hierarchical sequence according to said accepting one at a time,)**

PocketPAD fails to expressly teach **wherein editing, insertion, or deletion of a selected line segment, identically translate line segments that succeed the selected line segment of said hierarchical sequence without translating line segments that precede the selected line segment in said hierarchical sequence.**

However, Christensen teaches assigning a "sticky attribute" to a line segment so that when that line segment is moved; the lines that are attached to the "sticky" line segment will also move (see abstract, col. 1 lines 58-66). In other words, Christensen teaches the capability to edit a "sticky" line segment that will translate the succeeding line segment of a hierarchical sequence without translating line segments that precede the selected "sticky" line segment in said hierarchical sequence because the "sticky attribute" can be assigned to one end of a line segment (e.g. the end attached to the succeeding lines) (see col. 6 lines 1-14). Therefore, closing a gap (i.e., editing) involving "sticky" line segment would automatically translate the attached succeeding lines.

**(claim 1; i.e., and wherein editing, insertion, or deletion of a selected line segment**

**identically translate line segments that succeed the selected line segment of said hierarchical sequence without translating line segments that precede the selected line segment in said hierarchical sequence. )**

In response to the newly amended limitation "identically translate", Examiner interprets the attached succeeding lines (i.e., succeeding line segments) of the "sticky" line segment that are translated to be "identically translated" because each succeeding line segment is moved from one place to another.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the editing capabilities for line segments as taught by PocketPAD to include a "sticky attribute" for line segments as taught by Christensen to provide the benefit of avoiding repetitious editing and revision procedures (see Christensen; col. 1 lines 18-24).

Claim 3:

PocketPAD teaches **wherein said line segment data entry fields comprise a start point field, a direction field, and a length field** (e.g. distance field) (see Drawing Lines p. 48-51).

Claim 4:

PocketPAD teaches **said display is a touch-screen** (see Place, Move, and Lift p. 19).

Claim 7:

PocketPAD teaches **further comprising a keypad** (see Setting the Keyboard or Pen p. 22).

Claim 8:

PocketPAD teaches **a method for entering blueprint data into a handheld device comprising: entering a start point for a first line segment; entering a length for said first line segment; entering a direction for said first line segment; entering a start point for an arc; entering a radius for said arc; entering a displaying said line segment and said arc on a display associated with said handheld device;** (see Introduction p. 9-10, Drawing Lines p. 48-54, Arc with Center tool p. 55, Arcs p.87, Polyline tool p. 51-53 )

PocketCAD teaches a Object Properties Dialog window for polylines capable of automatically updating the segmentation of a previously placed arc created by a polyline into at least two distinct arc segment (see Polylines p. 90). **(claim 8; i.e., providing a segment editor to automatically parse said arc into a plurality of arc subdivisions;)**

PocketCAD teaches creating a polyline with multiple line segments (see Polyline tool p. 51-53). **(claim 8; i.e., entering a start point for a second line segment, wherein said start point of said second line segment is an end point of said first**



**line segment; entering and displaying said second line segment on said display; entering a start point for a third line segment, wherein said start point of said third line segment is an end point of said second line segment;)**

PocketCAD teaches moving (i.e., translating) entities such as line segments (see p. Moving entities pgs. 76-77). **(claim 8; i.e., translating said second line segment so that the start point of said second line segment coincides with an end point of said third line segment;)**

As explained in claim 1, PocketCAD fails to explicitly recite the phrase “hierarchical sequence”; however, PocketCAD does suggest adding and storing line segments one at a time in a hierachical sequence. Therefore, Examiner relies on the rationale set forth in claim 1 regarding this limitation. **(claim 8; i.e., storing said first, second, and third line segments as a hierarchical sequence)**

PocketPAD fails to expressly teach wherein editing, or deletion of said second line segment automatically translates said third line segment without translating said first line segment.

However, Christensen teaches wherein editing a “sticky” line segment automatically translates a succeeding attached line segments without translating a preceding line segment (see col. 6 lines 1-14). **(claim 8; i.e., and wherein editing, or deletion of said second line segment automatically identically translates said third line segment without translating said first line segment.)**

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the editing capabilities for line segments as taught by PocketPAD to include a "sticky attribute" for line segments as taught by Christensen to provide the benefit of avoiding repetitious editing and revision procedures (see Christensen; col. 1 lines 18-24).

In response to the newly amended limitation "identically translate", Examiner interprets the attached succeeding lines (i.e., succeeding line segments) of the "sticky" line segment that are translated to be "identically translated" because each succeeding line segment is moved from one place to another.

Examiner notes that the phrase "identically translates" is referring to only one line segment (i.e., third line segment). Examiner interprets the phrase to require at least two segments being translated. In other words, the third segment cannot be identically translated to itself. Therefore, when the claim recites only one segment (i.e., third line segment) to be translated, the meaning of the phrase "identically translate" becomes unclear.

Claim 15:

Claim 15 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in system claim 1; therefore the claim is rejected under the same rationale as system claim 1 above.

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over by PocketPAD in view of Christensen as cited above, in further view of Minakata, U.S. Patent No. 5,568,565 B1.**

Claim 9:

Both PocketPAD and Christensen failed to expressly teach a repeat factor.

However, Minakata teaches "*Repetition factor Rf is a parameter which shows whether the user intends to repeatedly write line segments*" (see col. 5 lines 26-27).

**(claim 9; i.e., further comprising entering a repeat factor for said line segment.)**

Examiner interprets the repetition factor as equivalent to the repeat factor because the both the repetition factor and repeat factor indicate how many times the line segments should be repeated.

It would have been obvious to one of ordinary skill in the art at the time the invention to modify polyline interface as taught by PocketPAD in view of Christensen to include a repetition factor as taught by Minakata to provide benefit of allowing the user to repeatedly, yet efficiently write line segments (see Minakata; col. 5 lines 26-31).

#### **(10) Response to Argument**

##### **Rejections under 35 U.S.C. §103(a)**

##### **Claims 1, 3, 4, 7, 8 and 15**

Appellant submits that the combination of PocketCAD and Christensen does not satisfy the requirements of a prima facie case of obviousness because the features of

Claims 1, 8 and 15 would not have been obvious over the combination of PocketCAD and Christensen as a whole.

Specifically, Appellant submits that Christensen and PocketCAD in view of Christensen fail to suggest or other render obvious ***"identically translating line segments succeeding said selected line segment without translating line segments preceding said selected line segment."*** (emphasis added) (see Brief; page 12)

Examiner respectfully disagrees.

Firstly, Examiner notes that the instant application fails to define the term ***"translate"*** or the phrase ***"identically translate"*** so that the meaning of the terms in the claims may be ascertainable by reference to the description in the instant specification. Secondly, Examiner notes that without defining the phrase ***"identically translate"***, Appellant argues against the Christensen reference by alleging that Christensen is not capable of ***"identically translating"*** because the "sticky" attribute pulls or stretches lines and the lines are not "moved" from one place to another (see Brief; page 13). Based on Appellant arguments, it appears that Appellant is implying that "identically translating" comprises preserving the length of line segments and moving the line segments from one place to another.

In addition to the implication made by the Appellant, Examiner submits that according to the Merriam-Webster dictionary the term **"translate"** is defined as ***"to bear, remove, change from one place, state, form, or appearance to another"*** and

the term "identically" is defined as "*being the same*" or "*having such close resemblance as to be essentially the same*".

Since the claimed phrase "identically translating" is not ascertainable by reference to description in the instant specification, Examiner submits that based on the dictionary definitions one reasonable interpretation to the phrase "identically translating" would be "*multiple line segments changing from one place to another while the line segments stay the same*".

Examiner submits that under the interpretation provided above, Christensen Figures 1 and 2 illustrate "*multiple line segments changing from one place to another while the line segments stay the same*". For example, the end points of the line segments attached to the object 13 changes the positioning of the line segments from one place to another. Furthermore, the line segments are still the "same" after the repositioning (e.g. line segment 'AB' is still line segment 'AB'). Examiner notes that under the interpretation of "identically translating"; preserving the length of the line segments is not necessarily required as implied by Appellant. In other words, "identically" may merely refer to a line segment simply maintaining its existence after the change from one place to another.

In col. 2 lines 3-12, Christensen teaches "*If the object is given the "sticky" attribute, then a line will "stick to" the object it touches or overlays. Whenever the object that the line is stuck to is moved, the line will "rubber-band" and follow that object's movement. The term "rubber-band" is a term well recognized in the CAD art and*

*describes a line drawing technique **wherein one end of the line is fixed** and the other end follows a draw cursor on the screen until it is fixed by command.” (emphasis added)*

Examiner submits that the above passage (i.e., col. 2 lines 3-12) teaches Christensen's sticky attribute to pull or stretch lines as mentioned by the Appellant. (See Brief; page 13).

However, in col. 6 lines 2-6, Christen alternatively teaches “*the “sticky” attribute can just as easily be applied to a line end which touches an object so as to cause **the line end to follow the object should it be moved**.” (emphasis added)*

Examiner notes that the phrase “line end” may be reasonably interpreted by one skilled in the art to be an end point of a line segment. Therefore, one line object may have two end points. Examiner further notes that the “sticky” attribute is applied to an end point versus the line object as taught in the first passage (i.e., col. 2 lines 3-12). In light of the second passage, Examiner submits that any end point of a line object will no longer be fixed when the “sticky” attribute is applied directly to the end point; because the end point follows the line object should the line object move (see col. 6 lines 2-6). For instance, pulling or stretching the line object due to a fixed end point is no longer applicable when the “sticky” attribute is applied to the fixed end point of a line object. Therefore, stretching or pulling is prevented when the “sticky” attribute is applied to the fixed end point. Thus, Christensen does teach or suggests an alternative that does not result in pulling or stretching the lines as suggested by the first passage.

Christensen teaches attaching line objects to other line objects (i.e., plurality of succeeding line segments) (see col. 6 lines 6-10).

In response to the Appellant implications, Examiner submits that the second passage (i.e., col. 6 lines 2-6) of Christensen teaches or suggests that the attached succeeding lines of a first line object are “identically translating” when the “sticky” attribute is applied to each line object and corresponding end points; each attached succeeding line object is moved from one place to another in response to moving the first line object of the plurality of attached succeeding line objects. As noted above, there is no stretching when the “sticky” attribute is applied to a fixed end point resulting in an end point that is not longer fixed and is following the line object. Therefore, based on the Appellant implied definition of **“identically translating”**, Christensen still teaches or suggests **“identically translating”** because the line segments can be moved from one place to another while preserving the length of the line segments (e.g., no line stretching). (emphasis added)

Appellant submits that Examiner did not explain why the differences between PocketCAD, Christensen, and Appellant’s claimed features would have been obvious to one of ordinary skill in the art as required by MPEP. (see Brief; page 13)

Examiner respectfully disagrees.

Examiner submits in same field of endeavor of editing data using a graphic application that it would have been obvious to one of ordinary skill in the art at the time

of the invention was made to modify the editing capabilities for line segments as taught by PocketPAD to include a "sticky attribute" for line segments as taught by Christensen to provide the benefit of avoiding repetitious editing and revision procedures (see Christensen; col. 1 lines 18-24).

**Claim 9**

Appellant further argues that Minakata fails to teach or suggest "identically translates". (see Brief; page 14)

As noted above, Examiner relies on Christensen to teach or suggest "identically translates". Therefore, Examiner relies on the same rationale as set forth above.

Appellant submits that Examiner did not explain why the differences between PocketCAD, Christensen, Minakata and Appellant's claimed features would have been obvious to one of ordinary skill in the art as required by MPEP. (see Brief; page 14)

Examiner respectfully disagrees.

Examiner submits in same field of endeavor of editing data using a graphic application that it would have been obvious to one of ordinary skill in the art at the time the invention to modify polyline interface as taught by PocketPAD in view of Christensen



to include a repetition factor as taught by Minakata to provide benefit of allowing the user to repeatedly, yet efficiently write line segments (see Minakata; col. 5 lines 26-31).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Henry Orr/

9/10/2009

Conferees:

/William L. Bashore/

Supervisory Patent Examiner, Art Unit 2175

/DENNIS-DOON CHOW/

Supervisory Patent Examiner, Art Unit 2174